Special year-end issue

NEWSLINE

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Engineer helps Iraq war effort

By Stephen Wampler
NEWSLINE STAFF WRITER

In more than two decades at the Laboratory, Mike Newman has been involved in about a dozen field research projects.

He recently completed what he calls his "numero uno" or best project: working alongside the U.S. military in Iraq to develop advanced surveillance technologies.

"This wasn't just a research and development project; this was an effort to help U.S. soldiers and the people of Iraq," said Newman, a technical associate in Electronics Engineering.

For nine days in May and seven-and-a-half weeks in September and October, Newman lived in Camp Victory and Camp Slayer at Baghdad International Airport in the western part of the Iraqi capital.

He oversaw the development and fielding of round-the-clock surveillance tech-

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Lab employee Mike Newman (right) and Wayne Scardo, a contractor employee, stand outside the Multi-National Coalition Iraq Headquarters at Camp Victory near Baghdad International Airport.

State water resources board extends contract with Lab to monitor groundwater

By Lynda Seaver
NEWSLINE STAFF WRITER

The Laboratory will help the state's effort to assess groundwater quality following the signing of a two-year contract extension with the State Water Resource Control Board. The contract provides $1.6 million in funding over two years, with provisions for additional funded activities.

Known as Groundwater Ambient Monitoring Assessment (GAMA), the project will assess water quality in groundwater basins throughout the state. The work during the next five years will focus on the 116 priority groundwater basins that account for 90 percent of the state's groundwater use.

Laboratory scientists will analyze and interpret the results from samples taken from selected municipal water supply wells. Laboratory results will then be communicated to the State Water Resources Control Board and U.S. Geological Survey (USGS). The Laboratory and state board also will work together to identify focus areas for groundwater quality studies.

The Laboratory team, led by isotope hydrology experts and environmental scientists from the Environmental Protection Department and the Chemistry & Materials Sciences Directorate, will work in five key areas: tritium-helium analysis and reporting of groundwater age for public supply wells; nitrate studies in impacted groundwater basins; analysis of

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Health Services Department offers limited flu vaccines

The Laboratory's Health Services Department (HSD) has received a limited number of flu vaccine doses from Alameda County. To ensure those at highest risk are given first access to the limited supply, the vaccine will be available only to: LLNL women who are pregnant; current employees over the age of 65; and employees who suffer from chronic illness, such as heart disease, diabetes, kidney disease, asthma, cancer or HIV/AIDS.

Employees with illness must bring a note from their personal physician/clinician indicating that they have a chronic illness that requires flu vaccination. A specific diagnosis is not required. The

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Engineers find Lab pool is beyond repair

After careful study of options to address necessary repairs and maintenance, the Laboratory swimming pool will close on a permanent basis.

"This decision was not made lightly," noted Jan Tulk, associate director for Administration and Human Resources. "A technical committee has been looking at various options for quite some time now. While we all love the idea of having a pool, the repairs needed and the replacement cost was just too significant."

The Lab swimming pool, originally constructed in 1942 when the Lab was a Naval Air Station, was built as a training facility for pilots. In the mid-1950s, the pool was reconfigured as an Olympic-style swimming pool.

The Lab pool closed in June 2004 after inspections of the area identified extensive leaks and structural damages to the more than 50-year-old facility, as well as the need for extensive deck repair.

The Lab formed a technical pool committee, composed of LLNL structural engineers, Lab Services employees and an external consultant, to explore various options to repair or replace the pool. The committee found the existing pool to be irreparable, necessitating the need for demolition. The cost to demolish the existing pool facility was estimated at approximately $720,000 — a cost the Lab would have to undertake even if it decided to rebuild at the existing site. Options then explored included rebuilding a new facility, either at the existing location or at another site at the Lab.

But the total for demolition and replacement costs ranged from $1.8 million to more than $6

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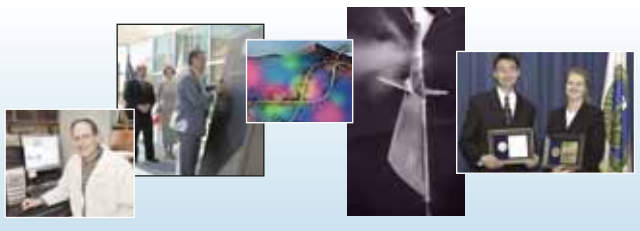

Newsline's annual 'Year in Review' issue, covering events in 2004 — Insert

LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 3

Tuesday 11

The first meeting of a new peer **support group** for Laboratory workers who have experienced the loss of a child, will be held today at noon in Bldg. 663, room 1057. The one-hour meetings are sponsored by Health Services' Employee Assistance Program and will continue to be offered on the second Tuesday of each month at noon at the same location. For more information, call 3-6609.

Thursday 13

The Lawrence Livermore Laboratory Women's Association (LLLWA) annual **scholarship awards ceremony** will take place today at noon in the Bldg. 543 auditorium. Cherry Murray, deputy director for Science and Technology, will present 12 scholarships to this year's recipients. Yahel De La Cruz, a former scholarship winner, also will give a brief talk on her scholarship experience.

Friday 14

The **2005 R&D 100 Award** draft submissions for internal review are due today by close of business, to the IPAC Office (Trailer 6925, room 1036). Contact Yvonne King at 2-7299 for further information.

• • •

Applications are due today for the **Computational Chemistry and Material Science (CCMS) summer institute** at the Laboratory, now in its fifth year. The goal of the institute is to provide an opportunity for graduate students to explore and learn some of the cutting-edge methods in computational materials sciences, computational chemistry and other related areas of computational science during their first few years of graduate study. For more information or to be considered for a position, go to the Website at http://www-cms.llnl.gov/ccms_summer_inst/

Up & Coming

Lab employees are invited to participate in the annual program celebrating the life of **Martin Luther King Jr.** on Monday, Jan. 24, from 1 to 2:30 p.m. in the Bldg. 123 auditorium. This year's keynote speaker will be Christopher Edley Jr., the new dean of Boalt Hall Law School at UC Berkeley and a national civil rights leader. Musical tributes will be presented by the Livermore Missionary Baptist Church Children's Choir and Isom Harrison, library division leader at TID. Recipients of the Laboratory's Martin Luther King Jr. scholarship will be introduced and will read their essays on King. This program is co-sponsored by The Director's Office, Administration and Human Resource Directorate and the Worklife Programs Office. For more information, call Susane Head, 3-6688.

Send calendar information by Wednesdays noon to Linda Lucchetti, lucchetti1@llnl.gov

BRIEFLY

New domestic partners law

A new state law that went into effect Jan. 1 gives registered domestic partners the same rights, protections and benefits as a legal spouse. Under the California Domestic Partner Rights Law, known as AB 205, registered domestic partners also will be subject to the same responsibilities, obligations and duties as a legal spouse.

The new law affects all UC and Laboratory policies where a legal spouse is mentioned. To be covered by provisions of this law, domestic partners must register with the State of California and must meet the following criteria:

• Parties must be each other's sole domestic partner in a long-term, committed relationship and must intend to remain so indefinitely;

• Neither party may be legally married;

• Parties must not be related to each other by blood to a degree that would prohibit legal marriage in the State of California;

• Both parties must be at least 18 years old and capable of consenting to the relationship;

• Parties must be financially interdependent;

• Parties must live together and intend to do so indefinitely.

Same-sex domestic partners may register their domestic partnership with the State of California. Opposite-sex domestic partners over the age of 62 and eligible for Social Security benefits also may register.

A number of LLNL policies and procedures will change to accommodate the new law, among them: the definition of near relative; conflict of interest; family sick leave and family and medical leave; domestic and foreign change of station; relocation; area familiarization trips for interviewees, and official house-hunting travel.

The University of California is in the process of changing its policies and the Laboratory is working closely with UC to ensure common language and policy agreement. Web links to the Personnel Policies and Procedures Manual will be made available to all Lab employees once the changes are completed.

For more information, contact Mike Hodsdon at 3-4005.

Power outage scheduled for Bldg. 132S

Electrical power will be shut down to all of Bldg. 132S from Friday afternoon (Jan. 14) through Monday, Jan. 17. The power outage will permit the repair of primary electrical feeder cables in Bldg. 132S.

Occupants of the building will be required to shut down their equipment and leave the facility by 4 p.m. Friday, Jan. 14. No one will be allowed back into the building until 3 a.m. on Tuesday, Jan. 18.

The outage will affect the building's offices, main lobby, auditorium, conference rooms, bathrooms and the Visualization Theater. Emergency power will be available during the weekend only to prearranged areas and equipment in the building. Individuals with requests for access or other questions should contact Eric Carlberg at 3-0139 or pager 05688.

Open Enrollment changes in paychecks

Changes made during the November Open Enrollment Period, should appear on biweekly paychecks dated Dec. 22 and monthly paychecks dated Jan. 1. Employees who made changes during Open Enrollment are encouraged to review their deductions to be certain the Open Enrollment changes they made in November are reflected on these paychecks.

Any problems should be reported to the Benefits Office at 2-9955 or visit Bldg. 571, room 1205.

IN MEMORIAM

Robert E. Smith

Robert E. Smith of Livermore, a renowned pathologist who founded two East Bay medical companies that helped develop drugs to combat infectious diseases, died on Dec. 16. He was 75.

He worked as a senior biologist at the Lab from 1975 to 1987. Smith held many patents, authored numerous articles in scientific journals and had received many awards. He was a past assistant professor of oncology and pathology at Stanford University. Smith worked in the early 1970s as a senior pathologist for Eli Lilly and Co. in Indianapolis. He later founded two Dublin-based medical companies that have since been sold, Enzyme Systems Products and Prototek Research Laboratories Inc.

Smith served in the U.S. Army Medical Corps until 1956 and earned a master's degree in zoology and biochemistry from Indiana University School of Medicine. He received his doctorate in comparative pathology from UC San Francisco in 1964.

He is survived by his wife, Judith Kinder Smith of Livermore; daughters Vanessa Alston of Miami, Elizabeth Green of London and Kindred Lehfeldt of Batesville, Ind.; sons Mark B. Smith of Modesto and Robert Smith of Noblesville, Ind.; and 11 grandchildren. Services have been held.

Memorial gifts may be made to the Robert E. Smith Endowment Chair S0294, UCSF Foundation, 44 Montgomery St., Suite 2200, San Francisco, 94104.

Newsline's classified ads available on Web this week

The first regular edition of *Newsline*, including classified ads, will appear Friday, Jan. 14. To appear in *Newsline*, classified ads must be submitted or resubmitted by the close of business Tuesday, Jan. 11. Current ads are available for viewing on the Web, https://www-ais.llnl.gov/newsline/ads/

Newsline

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

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Web site: http://www.llnl.gov/pao/

AROUND THE LAB

Employees urged to give directly to relief agencies

http://www.americares.org/
AmeriCares Foundation
88 Hamilton Ave.
Stamford, CT USA 06902

http://redcross.org/
American Red Cross
P.O. Box 37243
Washington, DC 20013

http://www.careusa.org/
Send a check with "Asia Quake Relief" on the memo line to:
CARE
151 Ellis St. NE
Atlanta, GA 30303-2440

There are ways you can help

The Laboratory's Asian Pacific American Council (APAC) has received a number of inquiries regarding donations for victims of the recent tsunami disaster.

APAC is recommending its members and all those who would like to support disaster relief send their donations directly to agencies providing assistance. A few are listed here.

http://www.oxfam.org/eng/
Oxfam America
Mail your check, payable to "Oxfam America,"
P.O. Box 1211
Albert Lea, MN 56007-1211

http://www.unicef.org/index.html
unicefusa.org
P.O. Box 98006
Washington, DC 20090-8006

An expanded listing of the agencies helping the tsunami victims is available at: http://www.cnn.com/2004/WORLD/asiapcf/12/28/tsunami.aid-sites/index.html

FLU

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documentation can be faxed directly to Health Services at 422-0633. Also, employees over age 65 need to bring a driver's license or other proof of age.

Shots will be administered at no cost from 1-4 p.m. in the Bldg. 663 library on Tuesday, Jan. 11, and Thursday, Jan. 13, while supplies last. For availability of the vaccine at Site 300, call Tina Perkins at the Site 300 Health Services facility, 3-5250. For other questions, call Carol Turner, 4-4516.

Although the Centers for Disease Control has expanded the list of individuals eligible to receive a flu shot to include adults over the age of 50, HSD will use the more restrictive criterion of age 65 due to the very limited supply. Health plan providers such as Kaiser Permanente have obtained additional vaccine doses and are able to vaccinate more people. HSD encourages LLNL employees to contact their health provider to determine their eligibility under the revised guidelines and vaccine availability.

Technical Meeting Calendar

Friday 7

H DIVISION SEMINAR
"Infrared Solution-Processed Quantum Dot Devices," by Edward (Ted) H. Sargent, 2004-5 visiting professor, Nanotechnology and Photonics, MIT Microphotonics Laboratory and Nortel Networks, Canada Research Chair in Emerging Technologies, Electrical & Computer Engineering, University of Toronto, 10 a.m., Trailer 2128 , ballroom 1000 (Common Use Facility). Contact: Jeffrey Grossman, 3-6991, or Julie Burnsides, 3-1277.

Monday 10

CHEMICAL BIOLOGY AND NUCLEAR SCIENCE/ BIOSECURITY & NANOSCIENCES LABORATORY
"New Chemical Tools for the Efficient and Systematic Study of Proteases," by Jonathan Ellman, Department of Chemistry, UC Berkeley. 2 p.m., Bldg.151 room 1209. Foreign nationals may attend if approved plan is on file, which includes Bldg. 151. Contact: Jeff Tok, 3-1549, or Ted Tarasow, 3-7241.

PHYSICS AND ADVANCED TECHNOLOGIES /N DIVISION
"Shifted-Contour Approach for Shell Model Monte Carlo Method," by Gergana Stoitcheva. 2:30 p.m., Trailer 2128, ballroom. Contact: Erich Ormand, 2-8194, or Annette Cook, 2-7856.

Tuesday 11

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH
"Risk Based Testing," by Scott Margolis. 10 a.m., Bldg. 451, room 1025 (property protection area). Compuware product demonstrations to follow seminar in the same room. For more information, go to http://www.llnl.gov/casc/calendar.shtml. Contact: Vicki Pope, 2-3426, or Angel Weigel, 2-5654.

BIOLOGY AND BIOTECHNOLOGY RESEARCH PROGRAM / ENGINEERING
"Multiplexed Lateral Flow Assays using Quantum Dot Reporters," by James Lambert, technical group supervisor, Jet Propulsion Laboratory. 10:30 a.m., Bldg. 361 auditorium. Contact: Ray Mariella, 2-8905.

I DIVISION SEMINAR
"Polarization and Diffraction Engineering: Expanding the Optical Designer's Toolbox," by James R. Leger, University of Minnesota., 1-1:45 p.m., Bldg. 155, room 1101 auditorium (property protection area). Foreign national temporary building access procedures apply. Contact: Robin Sachau, 2-6300.

PHYSICS & ADVANCED TECHNOLOGIES DIRECTORATE-WIDE SEMINAR
"X-Ray FELs and High-Energy Density Science," by Richard W. Lee, V Division. 2 p.m., Trailer 2128, room 1000 (common use facility). Foreign nationals may attend. Contact: Alan J. Wootton, 2-6533.

CHEMISTRY AND MATERIALS SCIENCE DIRECTORATE/FRONTIERS IN CHEMISTRY & MATERIALS SCIENCE
"Ultrafast Quantum Control," by Philip H. Bucksbaum, Otto Laporte professor of physics, FOCUS Center, University of Michigan. 3:30 p.m., Bldg. 155 auditorium. Coffee and cookies will be served at 3:15 p.m. Foreign nationals may attend if approved security plan is on file, which includes Bldg. 235. For more information on Bucksbaum, go to http://gomez.physics.lsa.umich.edu. For more information on the seminar series, go to http://www-cms.llnl.gov/cms_frontiers_ext/index.html. Contact: Michael Fluss, 3-6665, fluss1@llnl.gov, or Kathleen Moody, 3-5948, moody2@llnl.gov.

Thursday 13

BIOLOGY & BIOTECHNOLOGY RESEARCH PROGRAM SEMINAR
"Development of Micro-Devices for Bioresearch Applications," by Ming Tan. 10:30 a.m., Bldg. 361auditorium. Contact: Alice Yamada, 2-4723.

Friday 14

INSTITUTE FOR GEOPHYSICS AND PLANETARY PHYSICS
"Ice and Carbonaceous Material in Dusty Galactic Nuclei," by Jacqueline Keane, NASA. Noon, Bldg. 319, room 205. All attendees need to be badged. Contact: Wil van Breugel, 2-7195, or Lisa Lopez, 3-0250.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Please submit your meetings via the new Technical Meeting Calendar form on the Web, located at https://www-r.llnl.gov/tmc

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IRAQ

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nologies for tracking terrorists and protecting the U.S. military. He served as the chief systems integrator and was the technical lead for 19 people from six different companies.

"We shortened the time from detection to response and we made major advances in integrating different sensor technologies into one system. We probably compressed six months work into 60 days," he added.

On the first day the surveillance system became operational, the people running the system positively identified a terrorist team that had launched a mortar attack, Newman said. Since then, the surveillance system has successfully spotted terrorists on other occasions, he said.

"In my career at the Laboratory, I've always looked for two things in projects: one, is it worthwhile doing it; and two, is it technically challenging and personally rewarding?"

"This is worthwhile because it protects our soldiers, and it was an opportunity to learn about and integrate a full spectrum of technologies into one system," Newman said.

Army Maj. James T. Skinner, who oversaw Newmans work, offered praise for the Laboratory employees' efforts in Iraq.

"Mike Newman was a key player in the deployment and integration effort in making the new surveillance system a valuable asset to the 1st Cavalry Division. I would not want anyone else to be my technical lead for a project of this magnitude and diversity other than Mike," Skinner said.

"He gave tirelessly to the effort and is a great American who sincerely cares about his work and appreciates its importance to the end user, the soldier. Without his dedication and expertise, the project would not have succeeded in the time frame allotted."

A typical day in Iraq for Newman started with breakfast at 6 a.m., followed by calls back to the United States and e-mails. He often attended the 30-minute Multi-National Coalition Iraq Force briefing, which is given five days per week and provides a status report on the war.

"This was a way to know what was going on and to satisfy my thirst for news because I'm something of a news junkie."

After the briefings, Newman did his job — checking on the progress of contractors, interacting with the U.S. Army Corps of Engineers, working on the surveillance technology and obtaining the necessary equipment for the project.

According to Newman, the Camp Victory and Camp Slayer area is an attractive location with palm trees and manmade lakes and six of the Saddam Hussein family's palaces, the Victory Over Iran palace, Victory Over America palace, Water palace, and Perfume palace, plus the palaces of his now-deceased sons, Uday and Qusay.

During his stay in Iraq, the weather was hot, Newman said, with temperatures in the 100 degree range every day, except for the last two weeks when they dropped into the 90s.

"The heat is very noticeable when you're wearing body armor and a Kevlar helmet. One day I sweat so much that the money inside my wallet was wet."

As a part of his work, Newman interacted with people from Iraq, Kuwait, India, the Philippines and other nations.

"I found them to be very friendly. They want security and peace and they are people who are trying to help their families."

Newman credited several fellow Laboratory employees with helping him before he left and during his stay, including Mark Strauch of Electronics Engineering, Milt Finger of Department of Defense Programs, Jim Trebes and Gary Stone, both of M Division, and JoAn Levy, who handled his travel.

One of the most rewarding aspects of Newman's time in Iraq, he said, was seeing how helpful people were while working together.

"Everyone knew the surveillance system was to help them and they were resourceful in providing hardware, manpower and even making a special cake for us in the chow hall."

WATER

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wastewater indicators and emerging contaminants in groundwater; stable isotope analysis for domestic wells in the GAMA program; and project management.

"By understanding the age of groundwater, we can help see how anthropogenic contamination is spreading and provide insights that can help the state protect the quality of groundwater resources," said Jesse Yow, division leader for Environmental Restoration in the Environmental Protection Department. Yow will lead the project, with assistance from Jean Moran.

"This work will play an important role as the state looks at the short- and long-term management of its important groundwater resource," Yow said.

The state turned to the Laboratory for assistance in water sampling and analysis following the Lab's 1990s study of leaking underground fuel tanks throughout the state and their effect on groundwater resources. That study led to sweeping changes in understanding the environmental impact of leaking underground fuel tanks.

"Our scientists have worked to help utilize new technologies to better enable regulatory objectives," said Ellen Raber, head of the Environmental Protection Department head. "The new contract is an extension of previous GAMA work performed by the Laboratory, which began about four years ago and has continued to grow."

Laboratory scientists introduced the state board to the concept of using age-dating as a method of determining the vulnerability of wells to surface contaminants. "We now enjoy the collaboration of Lab and USGS scientists in the most extensive and comprehensive assessment of groundwater quality in the nation," said James Giannopoulos of the State Water Resources Control Board.

Groundwater is an important source of water in California, making up approximately 50 percent of public supply. The groundwater quality impacts from discharges of waste to land as well as use of agricultural fertilizers have increased dramatically in the state over the last 50 years. Anthropogenic nitrate is the most prevalent contaminant in groundwater.

The state study is expected to last five to 10 more years. Yow said the Laboratory could receive additional contract extensions. The Laboratory will begin this new phase of analytical work immediately.

"This gives us a chance to further exercise our capabilities in environmental protection science and technology and put them to good use," Yow said.

POOL

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million, depending upon the proposed location.

"It is just not possible to justify the cost of rebuilding a pool," said Tulk.

"We understand that this has been a wonderful benefit for our employees. We will make every effort to investigate community options for our swimmers."

Between 40-100 swimmers, including Lab, DOE/NNSA and Sandia employees and retirees used the pool daily. LLESA networking groups such as the kayak, underwater hockey and scuba diving clubs also used the pool at night.

At the time of the Lab pool's temporary closure last year, Lab managers worked with the Livermore Area Recreation and Park District (LARPD) to allow Lab swimmers to use the pool at May Nissen Park until late November, when the swimming center closed for the winter season. Managers are again working with LARPD to identify options for LLNL employees at other district aquatic centers.

The committee looked at the cost to repair the existing facility or replace the Lab pool with a 25-meter, 33-meter and 50-meter pool at the current pool site, or build a new pool at the old Central Cafeteria site, near the West Gate or in the north buffer zone.

Industry life expectancy standards for in-ground pools are approximately 30 years. Over the years, the Laboratory has spent more than $1.6 million on pool facilities, upgrades, recaulking and resealing. Work to demolish the pool will begin in the next few months.

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